



US006431245B1

(12) **United States Patent**
Shen

(10) Patent No.: **US 6,431,245 B1**

(45) Date of Patent: **Aug. 13, 2002**

(54) **WINDOW SHADE**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/739,609**

(22) Filed: **Dec. 19, 2000**

(51) Int. Cl.⁷ **E06B 3/48**

(52) U.S. Cl. **160/84.03; 160/84.07**

(58) Field of Search **160/84.03, 84.07,**
160/115, 134

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,799,524 A * 1/1989 Guernonprez

5,092,383 A * 3/1992 Niemeijer et al.

5,197,526 A * 3/1993 Schon

5,207,257 A * 5/1993 Rupel

5,341,864 A * 8/1994 Rupel et al.

5,860,464 A * 1/1999 Schon

* cited by examiner

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(57) **ABSTRACT**

A window shade is formed of a top rail, a pliable shade body, and a pull cord set. The top rail has an arresting member and two actuating members. The shade body is provided with a plurality of cross pleats, a middle tube, and a bottom tube. The middle tube is provided with a middle cross rod fitted thereinto. The bottom tube is provided with two bottom cross rods fitted thereinto. The shade body can be folded to have an ornamental form by the pull cord set in conjunction with the arresting member and the two actuating members.

2 Claims, 8 Drawing Sheets

